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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,658	08/27/2001	Kazuya Nakada	M 6820 PCT/US	2363

7590

10/03/2002

Henkel Corporation
2500 Renaissance Boulevard Suite 200
Gulph Mills, PA 19406

EXAMINER

OLTMANS, ANDREW L

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 10/03/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,658

Applicant(s)

NAKADA, KAZUYA

Examiner

Andrew L Oltmans

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 10-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 10, 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. In claim 10, lines 2-8, the claim recites that the hydrophilization agent has a component selected from the group consisting of “polyvinyl alcohol polymers... and reaction products... and diketenes”. In view of the Markush format, it is unclear whether the group is polyvinyl alcohol polymers or reaction products thereof [wherein diketenes are a required component] or if the group is polyvinyl alcohol polymers, reaction products thereof or diketenes, see MPEP 2173.05 (h).

b. Claims dependent upon the above are likewise rejected under this statute.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

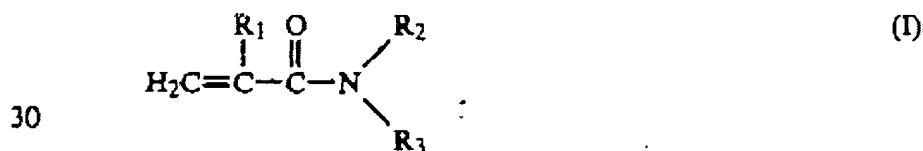
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Sako et al. 4,954,372 in view of Japanese Patent JP 06-116527 A

3. Claims 1, 10-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. 4,954,372 (Sako; cited on IDS filed December 7, 2001) in view of Japanese Patent JP 06-116527 A (JP '527; cited on IDS filed December 7, 2001).

Sako teaches a coated hydrophilic metallic material, a method of forming the coated material and the composition used in the process of forming the coated material wherein the coated material is useful as a heat exchanger and the method of coating includes a step of degreasing, pre-treating with a conversion coating, coating with a hydrophilic composition, and drying, as recited in claims 14-16, 28-29, 31-32 (col 1, lines 7-14; col 4, lines 17, col 8, lines 63-66). Sako teaches that the coating composition includes a first polymer (corresponding to component A instantly claimed), a second polymer (corresponding to component B instantly claimed) and a crosslinking agent, as recited in claim 1, as recited in claims 1, 10-11 and 20-26 (col 4):

20 (a) a first water-soluble polymer having a chemical structure formally obtainable by polymerizing a mixture of molecules all containing addition-polymerizable carbon-carbon double bonds, wherein at least 40 number
25 percent of the molecules in the mixture have a structure according to the general formula (I)



wherein R₁ represents H or CH₃; R₂ and R₃ each independently represents H, alkyl having 1 to 4 carbon
35 atoms, benzyl, or hydroxyalkyl having 2 or 3 carbon atoms;

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- (b) a second water-soluble polymer having a chemical structure formally obtainable by polymerizing a mixture of molecules all containing addition-polymerizable carbon-carbon double bonds, wherein at least 60 number percent of the molecules in the mixture also contain a moiety selected from the group consisting of carboxyl groups, carboxylate salts, sulfonic acid group, sulfonate salts, phosphonic acid group, phosphonate salts, amino groups, salts of amino groups, and quaternary ammonium groups; and
- (c) a water-soluble crosslinking agent which is cosoluble with both (a) and (b).

[see also col 4, line 55 to col 6, line 37]

Sako teaches that crosslinking agent may include a metal ion, including vanadium, titanium and zirconium (col 7, lines 4-32). Sako also teaches the addition of the ingredient recited in claim 12 (col 8, lines 46-51). Sako teaches compositional ranges that appear to overlap those instantly claimed in claims 13, 17-19, 27 and 34 (col 7, lines 50-54; col 8, lines 6-26 and Sako: claim 10). Sako teaches a thickness for the hydrophilic coating that encompasses the range instantly claimed in claims 30 and 33 (col 8, lines 59-60).

Although Sako teaches the inclusion of a crosslinking agent selected from a list of metals including vanadium, titanium and zirconium, Sako fails to meet all the limitations of the instant claims in that Sako does not explicitly teach the combination of vanadium with titanium, zirconium or silicon. Sako also fails to teach the exact same ranges of composition.

JP '527 teaches crosslinking agents for hydrophilic polymer compositions, wherein the crosslinking agents include vanadium (see abstract), with compounds including silicon (see abstract), titanium and zirconium (see paragraph [0013] of English language translation). JP '527 teaches that the combination of vanadium with titanium (fluoride), zirconium (fluoride) or

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silicon (silica or fluoride) work together to provide the hydrophilic coating with excellent endurance and corrosion resistance (see paragraph [0013] of English language translation).

One of ordinary skill in the art at the time that the invention was made would have found the selection of vanadium in combination with titanium, zirconium or silicon as the crosslinking agents of Sako obvious because one of ordinary skill in the art would have been motivated to provide Sako with the desirable properties that result when vanadium is used together with titanium (fluoride), zirconium (fluoride) or silicon (silica or fluoride), including excellent endurance and corrosion resistance, as taught in JP '527.

With respect to the compositional ranges, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the coating compositions taught by the reference overlap that of the instant claims, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Oltmans whose telephone number is 703-308-2594. The examiner can normally be reached 8:30-5:00 Monday-Friday.

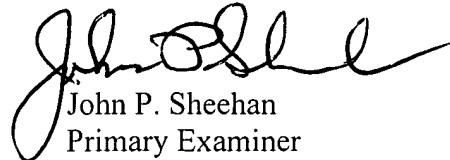
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-873-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


ALO

September 27, 2002


John P. Sheehan
Primary Examiner
Art Unit 1742